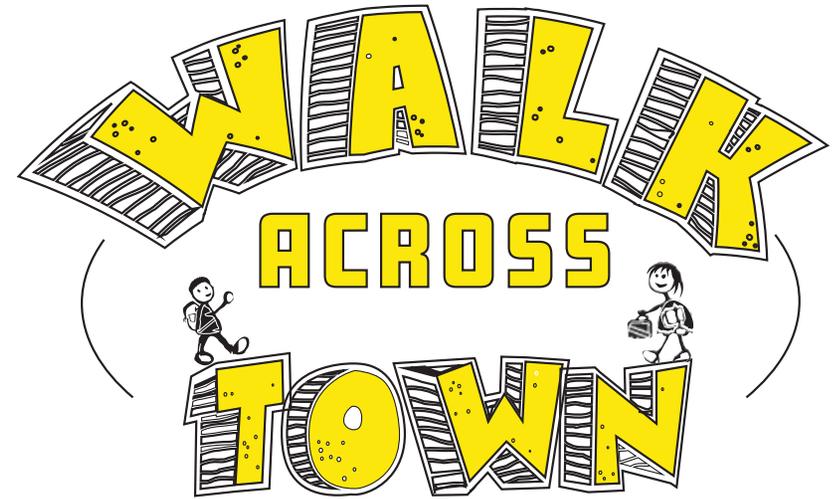


**THANKS FOR WALKING!**



[www.saferoutesga.org](http://www.saferoutesga.org)



A GEORGIA RESOURCE CENTER  
**ACTIVITY BOOKLET**



# Overview of the Georgia Safe Routes to School Resource Center

The Georgia Safe Routes to School Resource Center is a Georgia Department of Transportation (GDOT) project that provides hands-on support, assistance, resources, and materials to schools and communities to make walking and bicycling to school a more desirable and safer transportation option.

For more information, visit our website at [www.saferoutesga.org](http://www.saferoutesga.org)



# A Note for Parents & Teachers



The Walk Across Town Pedometer Activity Booklet has been developed with careful thought and written under guidance from the Georgia Mathematics and Science Performance Standards for Grades 3 and 4. The activities in this booklet cover Number and Operations, Measurement, Data Analysis, Process and Practice Skills.

## Standards for Mathematical Practice

1. Make sense of problems and persevere in solving them.
2. Reason abstractly and quantitatively.
3. Construct viable arguments and critique the reasoning of others.
4. Model with mathematics.
5. Use appropriate tools strategically.
6. Attend to precision.
7. Look for and make use of structure.
8. Look for and express regularity in repeated reasoning.

## Math standards addressed in this booklet include:

- MGSE3.NF.1
- MGSE3.NF.3
- MGSE3.NBT.4
- MGSE4.NBT.5
- MGSE4.OA.1
- MGSE4.OA.2
- MGSE4.OA.3
- MGSE4.MD.1
- MGSE4.D.2

## Standards for Science Practice

- S3L2 Obtain, evaluate, and communicate information about the effects of pollution (air, land, and water) and humans on the environment.

*This resource was inspired by a teacher in 2011. Unfortunately, their name and school affiliation has been lost to history. We are grateful for the inspiration. The booklet was updated in 2020.*



## Glossary



**Digit** - This is another word for a number from 0-9. Using the word digit is helpful when looking at a number that is 10 or greater. It allows you to talk about each number (or digit) that makes up that number. For example, the number 2015 is made up of four digits: 2, 0, 1, and 5.

**Carbon calculator** - This is a tool to estimate a person's carbon footprint (or emissions), based on how much energy and what kind of energy is used in daily activities. The result of the calculation is an estimated emission figure of tons of carbon dioxide or CO<sub>2</sub> - that is a person's Carbon Footprint. \*

**Carbon footprint** (also called Carbon emission) - This term tells you the total set of greenhouse gas (GHG) emissions caused by an organization, event, product or person. \*

**Greenhouse gases** - This is any gas that absorbs infrared radiation in the atmosphere. We can't see infrared but we feel it as heat. Greenhouse gasses (also invisible to us without special tools) absorb that heat. Greenhouse gases include water vapor, carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), halogenated fluocarbons (HCFCs), ozone (O<sub>3</sub>), per-flourinated carbons (PFCs), and hydrofluorocarbons (HFCs).\*

\*Source: <https://archive.epa.gov/climatechange/kids/basics/today/index.html>

## Introduction



Are you ready for an adventure in math, science, and physical activity? Through this activity booklet you will learn how easy it is to walk or ride your bike to close locations. You will do this by comparing the pretend steps from the map activities to the actual steps you take every day. At the end of the booklet, you will use a carbon calculator to help you find how much carbon you saved by walking. A carbon footprint is the amount of greenhouse gas a person makes in his or her daily life. Greenhouse gases exist naturally in the atmosphere to keep the Earth warm enough for plants and animals to live. Extra gasses are produced from burning fossil fuels and are harmful to our environment. Your parents fill their car up with gasoline. Gasoline is a fossil fuel. The easiest way to reduce your carbon footprint is to walk more and ride in cars less. For four days, you will complete both the "Map Activity" and the "Pedometer Activity" every day. On the fifth day, you will compare your results from the week to a Carbon Calculator chart to see how much your week of walking reduced your carbon footprint.

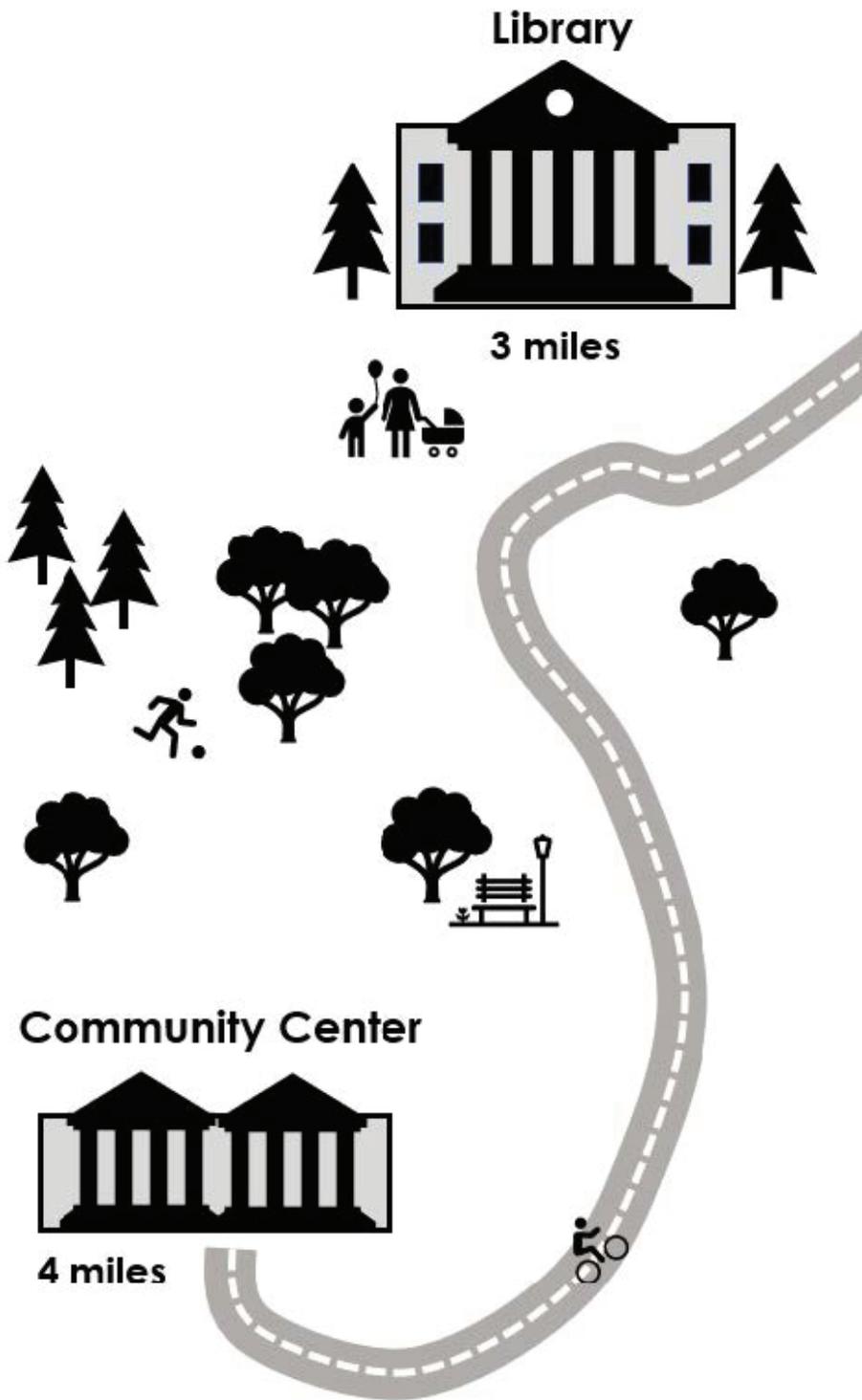
### **For these activities you will need the following:**

- Pencil
- Pedometer or other step tracking device

### **What is a pedometer?**



A pedometer records the number of steps you take. To complete this booklet, you'll be recording the number of steps you take each day. Make sure the pedometer is set to zero at the start of each day. Attach the pedometer to your waistband and start walking! After you complete the day's activities, you will reset the pedometer so you can track your steps for the next day. If you are using another kind of step tracking device (a device to wear or an application on a phone), just take a look at how many steps you took the day before.



## Carbon Calculator Chart

How much gas did you save? How much carbon is **NOT** in the air because you walked? Follow the instructions on page 15 to find out!

Steps	Miles	Amount of gas saved	Amount of carbon dioxide not going into the air *
1,000	½ mile	4 ¼ tbsp	⅓ lbs
2,000	1 mile	8 ½ tbsp	⅔ lbs
3,000	1 ½ miles	12 ¾ tbsp	1 lbs
4,000	2 miles	1 cup 1 tbsp	1 ⅓ lbs
5,000	2 ½ miles	1 cup 5 ¼ tbsp	1 ⅔ lbs
6,000	3 miles	1 cup 9 ½ tbsp	2 lbs
7,000	3 ½ miles	1 cup 14 tbsp	2 ⅓ lbs
8,000	4 miles	2 cups 2 ¼ tbsp	2 ⅔ lbs
9,000	4 ½ miles	2 cups 6 ½ tbsp	3 lbs
10,000	5 miles	2 cups 10 ¾ tbsp	3 ⅓ lbs
15,000	7 ½ miles	4 cups	5 lbs
20,000	10 miles	5 cups 5 ½ tbsp	6 ⅔ lbs
25,000	12 ½ miles	6 cups 10 ¾ tbsp	8 ⅓ lbs
30,000	15 miles	8 cups	10 lbs
35,000	17 ½ miles	9 cups 5 ½ tbsp	11 ⅔ lbs
40,000	20 miles	10 cups 10 ¾ tbsp	13 ⅓ lbs
45,000	22 ½ miles	12 cups	15 lbs
50,000	25 miles	13 cups 5 ½ tbsp	16 ⅔ lbs
55,000	27 ½ miles	14 cups 10 ¾ tbsp	18 ⅓ lbs
60,000	30 miles	1 gallon	20 lbs

\*<https://www.epa.gov/energy/greenhouse-gases-equivalencies-calculator-calculations-and-references>

What is number of steps you used with the chart?

How many miles did you walk?

How much gasoline did you save?

How much carbon did not go into the air?


# Carbon Calculator



**Do you want to know how walking instead of riding in a car can improve the air you breathe?**

Follow the steps below to use the carbon calculator chart and learn how much gas you saved during the past four days by walking. When you walk, you contribute to cleaner air by NOT putting carbon dioxide (CO<sub>2</sub>) into it. Think of it this way: The gas in a car makes carbon when the car runs. This causes pollution. The more you walk and bicycle, the less pollution goes into the air!

1. Look at page 14. What is the total number of steps you walked this week? Record that number here.

**I WALKED  STEPS THIS WEEK.**

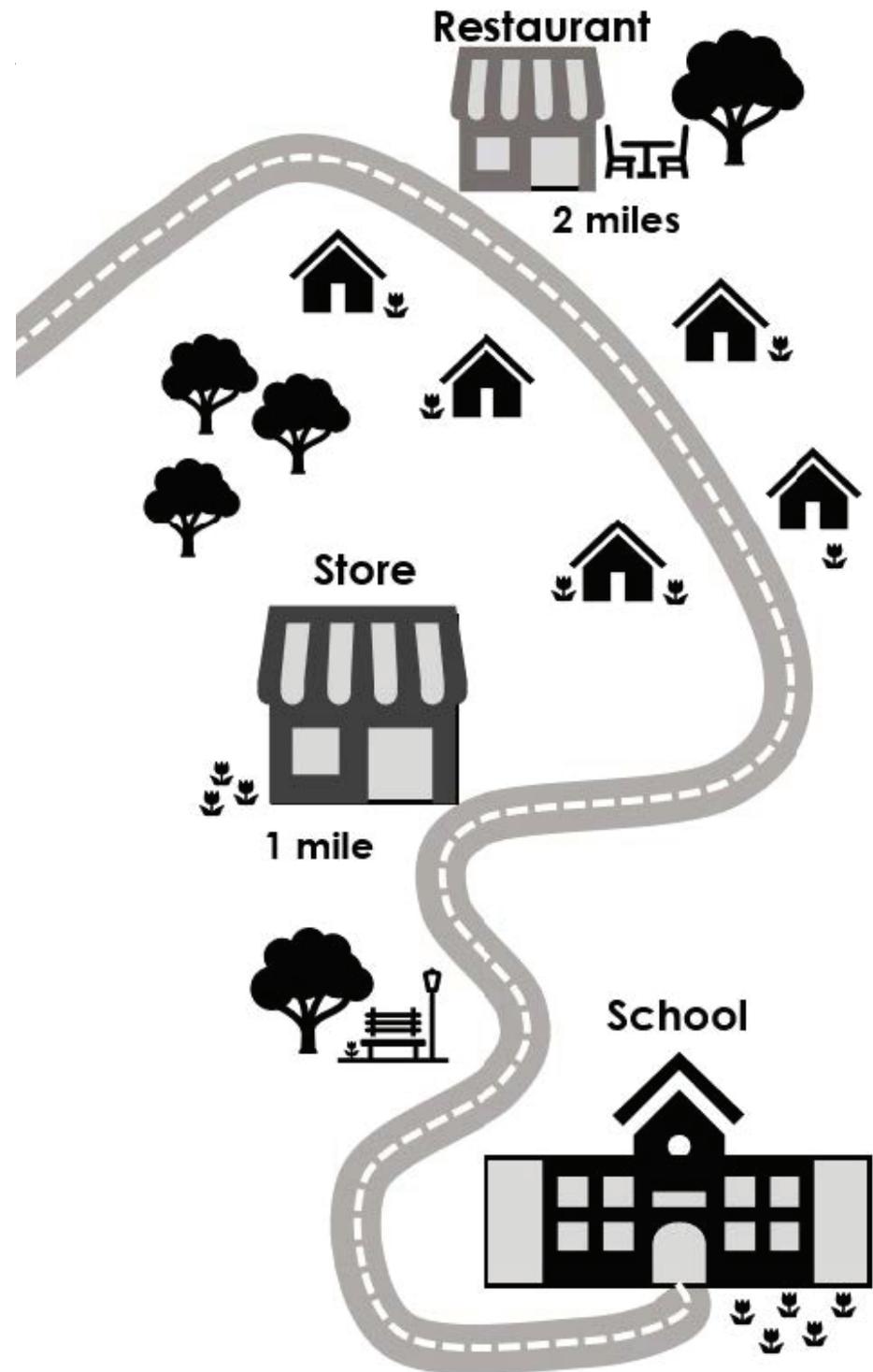
2. Round your total number of steps (above) to the nearest thousand. (example: 4,567 rounds to 5,000)

**NUMBER OF STEPS I WALKED THIS WEEK  
ROUNDED TO THE NEAREST THOUSAND.**

3. Using the total number of rounded steps you walked this week from step 2, compare your number to the chart on page 16. Find the number of steps closest to your number of steps. (example. 23,000 steps is closest to 25,000 steps in the chart) **Draw a star next to your number of steps on the chart.**

4. Follow the row across to find the:

- Miles you walked.
- The amount of gas you saved. Think of it in terms of the number of Tablespoons, Cups, and Gallons. You may use these measurements when cooking at home with an adult.
- The pounds (lbs) of carbon that didn't go into the air. Fill your numbers into the corresponding spaces below the chart.



# MAP ACTIVITY



# PEDOMETER ACTIVITY



## DAY 1

Look at the map on pages 3 and 4 to find how far the library is from the school.

### How many steps will it take to get to the library?

It takes approximately 2,000 steps to travel one mile. For these activities, we will use 2,000 steps = 1 mile.

**EXAMPLE-** If school is 6 miles from the library:

$$2,000 \text{ steps} \times 6 \text{ miles} = 12,000 \text{ steps}$$

OR

$$2,000 + 2,000 + 2,000 + 2,000 + 2,000 + 2,000 = 12,000$$

**2000 steps x \_\_\_\_\_ miles to the library = \_\_\_\_\_ steps**

**WALKING TO THE LIBRARY WILL TAKE  STEPS.**

## DID YOU KNOW?

Walking and bicycling are physical activities and help your heart stay healthy.



Look back at the last four days and record the steps you actually walked according to the pedometer.

### PEDOMETER STEPS

DAY 1	DAY 2	DAY 3	DAY 4
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Using the space below, add the total number of steps you actually walked during the week?

**I WALKED  STEPS THIS WEEK.**

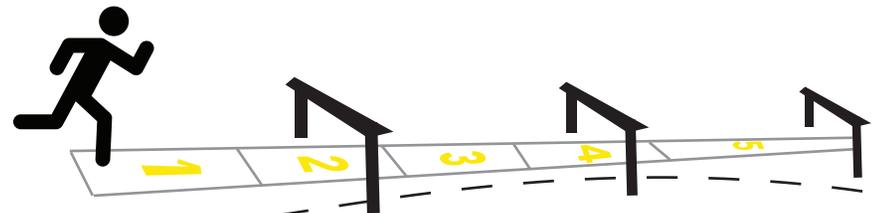
Did you walk enough total steps this week to meet the map activities total steps needed? **YES NO**

If you took more than enough steps this week, how many extra steps did you take?

If you didn't take enough steps, how many more steps do you need to take?

## ★PHYSICAL ACTIVITY TIP★

Use sidewalk chalk to make an obstacle course on the sidewalk or driveway. Challenge your family or friends!



# MAP ACTIVITY



# PEDOMETER ACTIVITY



## DAY 5

Look back at the last four days and record the steps from the map activities.

### MAP STEPS

DAY 1	DAY 2	DAY 3	DAY 4

Using the space below, add the total number of steps for each map activity day.

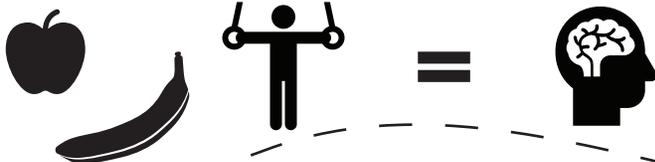
**TOTAL NUMBER OF MAP STEPS IT WOULD TAKE SOMEONE TO WALK FROM SCHOOL TO EACH PLACE IN TOWN EVERY DAY (TOTAL STEPS NEEDED DAYS 1-4).**

Which map activity day requires the most number of steps?

Which day did you take the most number of steps?

## DID YOU KNOW?

Making healthy choices keeps your body and mind strong!



## ★PHYSICAL ACTIVITY TIP★

Play Red Light/Green Light. Practice what the traffic signal colors mean.



## LOOK AT YOUR PEDOMETER. HOW MANY STEPS DID YOU WALK TODAY?

Transfer the number of steps you walked today to the blank squares below. Be sure to put each digit in the correct place value.

THOUSANDS:

HUNDREDS:

TENS:

ONES:

**EXAMPLE-** For 4,204 steps  
Thousands: 4  
Hundreds: 2  
Tens: 0  
Ones: 4

Compare the number of steps from the map activity to the number of steps you walked today.

Did you take enough steps today to walk to the library? YES NO

★ Don't forget to reset your pedometer now!

# MAP ACTIVITY



## DAY 2

Look at the map to find how far the restaurant is from school.  
**How many steps will it take to walk to the restaurant?**

★ Remember, it takes 2,000 steps to equal 1 mile.

2000 steps x \_\_\_ miles to the restaurant = \_\_\_\_\_ steps

Use this space to show your work:

**WALKING TO THE RESTAURANT WILL TAKE  STEPS.**

### ★ WALKING SAFETY TIP ★

Stop and look both ways before you cross the street.  
Make eye contact with drivers to be sure they see you.



# PEDOMETER ACTIVITY



**LOOK AT YOUR PEDOMETER.  
HOW MANY STEPS DID YOU WALK TODAY?**

Identify the number of steps you took on Day 4 is an even or odd number.  
Check the correct box:

Even Number

Odd Number

Use the space below to write a number sentence comparing the map steps and your pedometer steps. Use the greater than >, less than <, or equal to = symbols.

Compare the number of steps from the map activity to the number of steps you walked today.

**Did you take enough steps today to walk to the store?**

Yes No

### ★ PHYSICAL ACTIVITY TIP ★

Go for a walk with your parents, grandparents, or siblings.



# MAP ACTIVITY



## DAY 4

Look at the map to find how far the store is from school.

**How many steps will it take to walk to the store?**

★ Remember, it takes 2,000 steps to equal 1 mile.

2000 steps x \_\_\_\_ miles to the store = \_\_\_\_ steps

Use this space to show your work:

**WALKING TO THE STORE WILL TAKE  STEPS.**

### ★BIKE SAFETY TIP★

Always wear your helmet when you ride your bike.



# PEDOMETER ACTIVITY



**LOOK AT YOUR PEDOMETER.  
HOW MANY STEPS DID YOU WALK TODAY?**

**How many steps did you walk on Day 1 and Day 2?**

DAY 1:

DAY 2:

To find the difference between the number of steps you walked yesterday (or Day 1) and today (Day 2), what symbol would you use in your number sentence?

**Circle the correct answer:** + -

What is the difference of steps between Day 1 and Day 2?

Use the space on pg. 7 to show your work.

Compare the amount of steps from the map activity to the amount of steps you walked today.

★ Don't forget to reset your pedometer now!

### ★BIKE SAFETY TIP★

Ride your bike today. Have an adult check your bike for safety before you ride.



# MAP ACTIVITY



## DAY 3

Look at the map to find how far the restaurant is from school.

How many steps will it take to walk to the community center?

★ Remember, it takes 2,000 steps to equal 1 mile.

2000 steps x \_\_\_ miles to the community center = \_\_\_\_\_ steps

Use this space to show your work:

**WALKING TO THE COMMUNITY CENTER WILL TAKE HOW MANY STEPS?**

## WALKING SAFETY TIP★

Buddy up! It's always safest to walk and bike with a buddy or with a group.



# PEDOMETER ACTIVITY



**LOOK AT YOUR PEDOMETER. HOW MANY STEPS DID YOU WALK TODAY?**

Round the number of steps you took today to the nearest place value below:

TENS:	<input type="text"/>
THOUSANDS:	<input type="text"/>
HUNDREDS:	<input type="text"/>

**EXAMPLE** - For 4273 steps  
 Tens: 4270  
 Hundreds: 4300  
 Thousands: 4000

How many steps did you walk on Day 2 and Day 3?

DAY 1:  DAY 2:

Which number is less?

Compare the number of steps from the map activity to the amount of steps you walked today.

Did you take enough steps today to walk to the community center?

YES NO

## ★PHYSICAL ACTIVITY TIP★

You need 60 minutes of moderate physical activity each day to stay healthy. Walking and bicycling are great ways to stay active!

